CLAIMS:

1. Method of performing an iterative data reconstruction comprising the steps of: (a) determining projection data from estimated data for a plurality of projections; (b) determining a difference between the estimated data and measured data; (d) performing a filtering of the difference resulting in a filtered difference; and (e) performing a back-projection by updating the estimated data by using the filtered difference.

2. The method of claim 1, wherein the filtering is performed such that a mutual influence of the plurality of projections is at least partly filtered out.

3. The method of claim 1, wherein the method is based on the algebraic reconstruction technique (ART).

4. The method of claim 1, wherein at least one of steps (a), (b), (c) and (d) is performed simultaneously for at least two projections of the plurality of projections.

5. The method of claim 1, wherein for determining the filtered difference, a product of a projection of a current angle and an accumulation of back-projections of preceding angles is subtracted from the difference.

6. The method of claim 1, wherein the estimated data is an estimated image and wherein the difference is a difference image.

7. The method of claim 1, wherein the method is applied in computed tomography.

8. Image processing device, comprising: a memory for storing projection data; and an image processor for performing an iterative data reconstruction, wherein the image processor is adapted to perform the following operation: (a) determining projection data from estimated data for a plurality of projections; (b) determining a difference between the estimated data and measured data; (d) performing a filtering of the difference resulting in a filtered difference; and (e) performing a back-projecting by updating the estimated image by using the filtered difference.

9. Computer program for an image processing device comprising a processor, wherein the computer program comprises computer program code causing the processor to perform the following operation when the computer program is executed on the processor: performing an iterative data reconstruction comprising the steps of: (a) determining projection data from estimated data for a plurality of projections; (b) determining a difference between the estimated data and measured data; (d) performing a filtering of the difference resulting in a filtered difference; and (e) performing a back-projecting by updating the estimated image by using the filtered difference.